# UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/776,944 | 02/14/2001 | Pui Lun Lau | 57761.000144 | 4219 |

| 7590 | 03/29/2005 |
|---|---|

THOMAS M. BLASEY
HUNTON & WILLIAMS
1900 K STREET, N.W.
WASHINGTON, DC  20006-1109

| EXAMINER |
|---|
| MEUCCI, MICHAEL D |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2142 | |

DATE MAILED: 03/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

| | Application No. | Applicant(s) |
|---|---|---|
| Office Action Summary | 09/776,944 | LAU, PUI LUN |
| | Examiner | Art Unit |
| | Michael D Meucci | 2142 |

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
 after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
 Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
 earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on _09 November 2004_.

2a)☒ This action is **FINAL**.    2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) _1-43_ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-43_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _25 July 2001_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All   b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

## DETAILED ACTION

1.      This action is in regards to the Request for Reconsideration received on 09

November 2004.


### *Response to Amendment*

2.      Examiner acknowledges amendment to claim 3 to overcome the rejection under

35 U.S.C. § 112.  This rejection has been withdrawn.

3.      Examiner acknowledges amendment to overcome the objection on pages 9 and

10 of the specification.  This objection has been withdrawn.


### *Claim Rejections - 35 USC § 102*

4.      The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5.      Claims 1, 13, 16-18, 20 and 30 rejected under 35 U.S.C. 102(e) as being

anticipated by Bader et al. (U.S. 6,112,249) hereinafter referred to as Bader.

        a.      As per Claim 1, Bader teaches a network comprising a primary network

controller (lines 63-65 of column 7); a plurality of network devices wherein each network

device is connected to the primary network controller by a respective primary network

path (lines 47-48 of column 7 and block 20 of FIG. 3); at least one predetermined

primary backup network path connecting each network device with the primary network

controller, wherein each predetermined primary backup network path is blocked by the

network controller when a corresponding primary network path is active (lines 50-57 of

column 7); and wherein, when a primary network path between a network device and

the primary network controller fails, the primary network controller blocks the failed

primary network path and switches to one of the predetermined primary backup network

paths (lines 50-57 of column 7 and blocks 22, 24, and 26 of FIG. 3).

b.      As per Claim 13, Bader teaches the primary network controller comprising

a computer. "The network controller periodically checks the status of the primary

network communications path, to determine if that path has been reactivated," (lines 5-8

of column 8). It is inherent that the network controller is a computer in the system

disclosed by Bader.

c.      As per Claim 16, Bader teaches at least some of the network devices

comprise universal relays, (lines 32-44 of column 7)

d.      As per Claim 17, Bader teaches at least some of the network devices

comprise process controllers, (lines 21-26 of column 5).

e.      As per Claim 18, Bader teaches a control and data acquisition system

comprising the network of Claim 1, (lines 32-44 of column 7).

f.      As per Claim 20, Bader teaches teaches at least one network controller

(lines 63-65 of column 7); a plurality of universal relays (lines 32-44 of column 7); a

plurality of process controllers, (lines 21-26 of column 5); each network device

(universal relay and process controllers) is connected to the primary network controller by a respective primary network path (lines 47-48 of column 7 and block 20 of FIG. 3); at least one predetermined primary backup network path connecting each network device with the primary network controller, wherein each predetermined primary backup network path is blocked by the network controller when a corresponding primary network path is active (lines 50-57 of column 7); and wherein, when a primary network path between a network device and the primary network controller fails, the primary network controller blocks the failed primary network path and switches to one of the predetermined primary backup network paths (lines 50-57 of column 7 and blocks 22, 24, and 26 of FIG. 3).

g.      As per Claim 30, Bader teaches the primary network controller comprising a computer. "The network controller periodically checks the status of the primary network communications path, to determine if that path has been reactivated," (lines 5-8 of column 8). It is inherent that the network controller is a computer in the system disclosed by Bader.

## Claim Rejections - 35 USC § 103

6.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

a.      Claim 2 rejected under 35 U.S.C. 103(a) as being unpatentable over
Bader as applied to claim 1 above in view of Bass (U.S. 3,920,975).

Bader fails to teach the primary network controller periodically testing a condition
of the predetermined backup network paths.  However, Bass discloses: "The remote
test and control system of the invention provides remote testing and switching capability
for a data communications network having primary and backup facilities through a
network controller," (lines 30-33 of column 3).

One of ordinary skill in the art at the time of the applicant's invention would have
clearly recognized that it is quite advantageous for the network controller in Bader to
periodically test a condition of the backup network paths.  "A network controller located
at a central location which contains standard test equipment for generating and
analyzing the test signals that are applied to the network for troubleshooting as well as
generating and transmitting to the individual network remote data terminal stations
command signals for effectuating switching changes thereat to reconfigure the network
by switching between primary and backup facilities and also establish various test
modes," (lines 33-42 of column 2).  It is for this reason that one of ordinary skill in the art
at the time of the applicant's invention would have been motivated to have the network
controller periodically test a condition of the backup network paths in the system as
taught by Bader.

b.      Claim 3 rejected under 35 U.S.C. 103(a) as being unpatentable over
Bader as applied to claim 1 above in view of Tomioka (U.S. 5,452,115).

Bader fails to teach: "a secondary network controller that takes over control of the

network if the primary network controller fails, wherein each network device is

connected to the secondary network controller by a respective secondary network path;

at least one predetermined secondary backup network path connecting each network

device with the secondary network controller, wherein each predetermined secondary

backup network path is blocked by the network controller when a corresponding

secondary network path is active; and wherein, when a secondary network path

between a network device and the secondary network controller fails, the secondary

network controller blocks the inoperable secondary network path and switches to one of

the predetermined secondary backup network paths." However Tomioka discloses: "If,

as shown in FIG. 21, there is provided a backup network controller 9, switching may be

made to the backup network controller 9," (lines 51-53 of column 16).

One of ordinary skill in the art at the time of the applicant's invention would have

clearly recognized that it is quite advantageous for the network of Bader to comprise a

secondary network controller as described in the system of Tomioka having the

characteristics of the primary network controller as described in Bader. Likewise, it

would be obvious to one of ordinary skill in the art at the time of the applicant's invention

that the respective secondary network paths would be complimentary to the primary

network paths. Likewise, the secondary backup network paths would be complimentary.

to the primary backup network paths disclosed in Bader (see claim 1 rejection above).

"The monitor station should preferably be authorized to stop the network controller when

the fault of the controller is so severe that immediate recovery is difficult," (lines 48-51 of

column 16 in Tomioka). It is for this reason that one of ordinary skill in the art at the
time of the applicant's invention would have been motivated to comprise the system
with a secondary network controller having respective secondary network paths, at least
one secondary backup network path connecting each network device to the secondary
network controller having a secondary network path that is blocked by the network
controller when a corresponding secondary network path is active, and having the
secondary network controller block the inoperable path and switch to a secondary
backup path in the system as taught by Bader.

     c.     Claim 4 rejected under 35 U.S.C. 103(a) as being unpatentable over
Bader and Tomioka as applied to claim 3 above, and further in view of Bass.

Bader fails to teach the secondary network controller periodically testing a
condition of the predetermined secondary backup network paths. However, Bass
discloses: "The remote test and control system of the invention provides remote testing
and switching capability for a data communications network having primary and backup
facilities through a network controller," (lines 30-33 of column 3).

One of ordinary skill in the art at the time of the applicant's invention would have
clearly recognized that it is quite advantageous for the network controller in Bader to
periodically test a condition of the secondary backup network paths. "A network
controller located at a central location which contains standard test equipment for
generating and analyzing the test signals that are applied to the network for
troubleshooting as well as generating and transmitting to the individual network remote
data terminal stations command signals for effectuating switching changes thereat to

reconfigure the network by switching between primary and backup facilities and also establish various test modes," (lines 33-42 of column 2). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have the network controller periodically test a condition of the secondary backup network paths in the system as taught by Bader.

d.      Claims 5-7 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader as applied to claim 1 above in view of Law et al. (U.S. 6,373,838 B1) hereinafter referred to as Law.

Bader fails to teach primary network paths and primary backup network paths comprising a 10-megabit per second connection; an Ethernet 10Base-T connection; and twisted-pair cable, fiber optic cable, and/or coaxial cable. However, Law discloses: "In one implementation, the network access servers in NAS stack are Cisco Model No. AS5300 network access systems that each support multiple PRI (T1/E1) lines, a 100BaseT full duplex Ethernet, and a 10BaseT Ethernet," (lines 59-62 of column 3) and "The egress ports are typically implemented in high speed LAN or WAN interfaces such as 100BaseT, ATM or Optical Fiber," (lines 19-21 of column 5).

One of ordinary skill in the art at the time of the applicant's invention would have clearly recognized that it is quite advantageous for the network paths to comprise a 10-megabit per second connection, an Ethernet 10Base-T connection, and twisted-pair cable, fiber optic cable, and/or coaxial cable. "The primary and secondary interconnects and each consist of many high speed ports compatible with the interfaces of other components in DASA," (lines 23-26 of column 5 in Law. It is for this reason that one of

ordinary skill in the art at the time of the applicant's invention would have been motivated to comprise the network paths of a 10 megabit per second connection; an Ethernet 10Base-T connection; and twisted-pair cable, fiber optic cable, and/or coaxial cable in the system as taught by Bader.

     e.     Claim 8 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader in view of Law as applied to claim 5 above, further in view of Selig et al. (U.S. 5,521,958) hereinafter referred to as Selig.

Bader fails to teach the 10-megabit per second connection comprising a wireless connection. However, Selig discloses: "The first communication path is a wireless path," (Abstract); and "a mobile facility having an auxiliary wireless communication path with said portable communication and processing unit," (lines 1-3 of column 8).

One of ordinary skill in the art at the time of the applicant's invention would have clearly recognized that it is quite advantageous for the 10-megabit per second connection to comprise a wireless connection. "A mobile facility communicates with the processor," (Abstract of Selig). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to comprise the 10-megabit per second connection of a wireless connection in the system as taught by Bader.

     f.     Claims 9-11 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader as applied to claim 1 above in view of Law.

Bader fails to teach primary network paths and primary backup network paths comprising a 100-megabit per second connection; an Ethernet 100Base-T connection;

and twisted-pair cable, fiber optic cable, and/or coaxial cable. However, Law discloses:

"In one implementation, the network access servers in NAS stack are Cisco Model No.

AS5300 network access systems that each support multiple PRI (T1/E1) lines, a

100BaseT full duplex Ethernet, and a 10BaseT Ethernet," (lines 59-62 of column 3) and

"The egress ports are typically implemented in high speed LAN or WAN interfaces such

as 100BaseT, ATM or Optical Fiber," (lines 19-21 of column 5).

One of ordinary skill in the art at the time of the applicant's invention would have

clearly recognized that it is quite advantageous for the network paths to comprise a 100-

megabit per second connection, an Ethernet 10Base-T connection, and twisted-pair

cable, fiber optic cable, and/or coaxial cable. "The primary and secondary interconnects

and each consist of many high speed ports compatible with the interfaces of other

components in DASA," (lines 23-26 of column 5 in Law. It is for this reason that one of

ordinary skill in the art at the time of the applicant's invention would have been

motivated to comprise the network paths of a 100 megabit per second connection; an

Ethernet 100Base-T connection; and twisted-pair cable, fiber optic cable, and/or coaxial

cable in the system as taught by Bader.

g.      Claim 12 rejected under 35 U.S.C. 103(a) as being unpatentable over

Bader in view of Law as applied to claim 9 above, further in view of Selig.

Bader fails to teach the 100-megabit per second connection comprising a

wireless connection. However, Selig discloses: "The first communication path is a

wireless path," (Abstract); and "a mobile facility having an auxiliary wireless

communication path with said portable communication and processing unit," (lines 1-3 of column 8).

One of ordinary skill in the art at the time of the applicant's invention would have clearly recognized that it is quite advantageous for the 100-megabit per second connection to comprise a wireless connection. "A mobile facility communicates with the processor," (Abstract of Selig). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to comprise the 100-megabit per second connection of a wireless connection in the system as taught by Bader.

h.      Claims 14-15 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader as applied to claim 1 above in view of Law.

Bader fails to teach the primary network paths and primary backup network paths comprising a plurality of network bridges. However, Law discloses: "The primary interconnect 18 is a Cisco Catalyst Model No. 5002 100BaseT Ethernet switch and the secondary interconnect 20 is a Cisco Model No. 7206 10BaseT Ethernet switch," (lines 63-66 of column 3).

One of ordinary skill in the art at the time of the applicant's invention would have clearly recognized that it is quite advantageous for the primary network paths and primary backup network paths to comprise a plurality of network bridges. "Two or more switches can be connected together to increase the total number of ports available for connecting NAS's together," (lines 19-22 of column 4 in Law). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been

motivated to comprise the primary network paths and primary backup network paths of

a plurality of network bridges in the system as taught by Bader.

i.        Claim 19 rejected under 35 U.S.C. 103(a) as being unpatentable over

Bader as applied to claim 18 above, in view of Sanderson (U.S. 5,864,284).

Bader fails to teach the primary network controller monitoring the status of an

electrical power grid through the network. However, Sanderson discloses: "In addition

the data communication system of the present invention may serve as part of a control

and monitoring system for a power network or power grid," (lines 46-49 of column 3).

One of ordinary skill in the art at the time of the applicant's invention would have

clearly recognized that it is quite advantageous for the primary network controller to

monitor the status of an electrical power grid through the network. "The system for

providing data communication service to the customer premise as shown in FIG. 1 may

be modified to provide station-to-station communications for internal use of a power

company," (lines 43-46 of column 3 in Sanderson). It is for this reason that one of

ordinary skill in the art at the time of the applicant's invention would have been

motivated to have the primary network controller monitor the status of an electrical

power grid through the network in the system as taught by Bader.

j.        Claim 21 rejected under 35 U.S.C. 103(a) as being unpatentable over

Bader as applied to claim 20 above in view of Bass.

Bader fails to teach the primary network controller periodically testing a condition

of the predetermined backup network paths. However, Bass discloses: "The remote

test and control system of the invention provides remote testing and switching capability

for a data communications network having primary and backup facilities through a

.network controller," (lines 30-33 of column 3).

One of ordinary skill in the art at the time of the applicant's invention would have

clearly recognized that it is quite advantageous for the network controller in Bader to

periodically test a condition of the backup network paths. "A network controller located

at a central location which contains standard test equipment for generating and

analyzing the test signals that are applied to the network for troubleshooting as well as

generating and transmitting to the individual network remote data terminal stations

command signals for effectuating switching changes threat to reconfigure the network

by switching between primary and backup facilities and also establish various test

modes," (lines 33-42 of column 2). It is for this reason that one of ordinary skill in the art

at the time of the applicant's invention would have been motivated to have the network

controller periodically test a condition of the backup network paths in the system as

taught by Bader.

k.      Claim 22-24 rejected under 35 U.S.C. 103(a) as being unpatentable over

Bader as applied to claim 20 above in view of Law.

Bader fails to teach primary network paths and primary backup network paths

comprising a 10-megabit per second connection; an Ethernet 10Base-T connection; and

twisted-pair cable, fiber optic cable, and/or coaxial cable. However, Law discloses: "In

one implementation, the network access servers in NAS stack are Cisco Model No.

AS5300 network access systems that each support multiple PRI (T1/E1) lines, a

100BaseT full duplex Ethernet, and a 10BaseT Ethernet," (lines 59-62 of column 3) and

"The egress ports are typically implemented in high speed LAN or WAN interfaces such as 100BaseT, ATM or Optical Fiber," (lines 19-21 of column 5).

One of ordinary skill in the art at the time of the applicant's invention would have clearly recognized that it is quite advantageous for the network paths to comprise a 10-megabit per second connection, an Ethernet 10Base-T connection, and twisted-pair cable, fiber optic cable, and/or coaxial cable. "The primary and secondary interconnects and each consist of many high speed ports compatible with the interfaces of other components in DASA," (lines 23-26 of column 5 in Law. It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to comprise the network paths of a 10 megabit per second connection; an Ethernet 10Base-T connection; and twisted-pair cable, fiber optic cable, and/or coaxial cable in the system as taught by Bader.

I.      Claim 25 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader in view of Law, as applied to claim 22 above, further in view of Selig.

Bader fails to teach the 10-megabit per second connection comprising a wireless connection. However, Selig discloses: "The first communication path is a wireless path," (Abstract); and "a mobile facility having an auxiliary wireless communication path with said portable communication and processing unit," (lines 1-3 of column 8).

One of ordinary skill in the art at the time of the applicant's invention would have clearly recognized that it is quite advantageous for the 10-megabit per second connection to comprise a wireless connection. "A mobile facility communicates with the processor," (Abstract of Selig). It is for this reason that one of ordinary skill in the art at

the time of the applicant's invention would have been motivated to comprise the 10-megabit per second connection of a wireless connection in the system as taught by Bader.

m.    Claims 26-28 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader as applied to claim 20 above in view of Law.

Bader fails to teach primary network paths and primary backup network paths comprising a 100-megabit per second connection; an Ethernet 100Base-T connection; and twisted-pair cable, fiber optic cable, and/or coaxial cable. However, Law discloses: "In one implementation, the network access servers in NAS stack are Cisco Model No. AS5300 network access systems that each support multiple PRI (T1/E1) lines, a 100BaseT full duplex Ethernet, and a 10BaseT Ethernet," (lines 59-62 of column 3) and "The egress ports are typically implemented in high speed LAN or WAN interfaces such as 100BaseT, ATM or Optical Fiber," (lines 19-21 of column 5).

One of ordinary skill in the art at the time of the applicant's invention would have clearly recognized that it is quite advantageous for the network paths to comprise a 100-megabit per second connection, an Ethernet 10Base-T connection, and twisted-pair cable, fiber optic cable, and/or coaxial cable. "The primary and secondary interconnects and each consist of many high speed ports compatible with the interfaces of other components in DASA," (lines 23-26 of column 5 in Law. It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to comprise the network paths of a 100 megabit per second connection; an

Ethernet 100Base-T connection; and twisted-pair cable, fiber optic cable, and/or coaxial cable in the system as taught by Bader.

n.      Claim 29 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader in view of Law as applied to claim 26 above, further in view of Selig.

Bader fails to teach the 100-megabit per second connection comprising a wireless connection. However, Selig discloses: "The first communication path is a wireless path," (Abstract); and "a mobile facility having an auxiliary wireless communication path with said portable communication and processing unit," (lines 1-3 of column 8).

One of ordinary skill in the art at the time of the applicant's invention would have clearly recognized that it is quite advantageous for the 100-megabit per second connection to comprise a wireless connection. "A mobile facility communicates with the processor," (Abstract of Selig). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to comprise the 100-megabit per second connection of a wireless connection in the system as taught by Bader.

o.      Claim 31-32 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader as applied to claim 20 above in view of Law.

Bader fails to teach the primary network paths and primary backup network paths comprising a plurality of network bridges. However, Law discloses: "The primary interconnect 18 is a Cisco Catalyst Model No. 5002 100BaseT Ethernet switch and the

secondary interconnect 20 is a Cisco Model No. 7206 10BaseT Ethernet switch," (lines 63-66 of column 3).

One of ordinary skill in the art at the time of the applicant's invention would have clearly recognized that it is quite advantageous for the primary network paths and primary backup network paths to comprise a plurality of network bridges. "Two or more switches can be connected together to increase the total number of ports available for connecting NAS's together," (lines 19-22 of column 4 in Law). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to comprise the primary network paths and primary backup network paths of a plurality of network bridges in the system as taught by Bader.

p.      Claims 33-34 and 38-39 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader in view of Bass.

Bader teaches a network comprising a primary network controller (lines 63-65 of column 7); a plurality of network devices wherein each network device is connected to the primary network controller by a respective primary network path (lines 47-48 of column 7 and block 20 of FIG. 3); at least one predetermined primary backup network path connecting each network device with the primary network controller, wherein each predetermined primary backup network path is blocked by the network controller when a corresponding primary network path is active (lines 50-57 of column 7); and wherein, when a primary network path between a network device and the primary network controller fails, the primary network controller blocks the failed primary network path and

switches to one of the predetermined primary backup network paths (lines 50-57 of column 7 and blocks 22, 24, and 26 of FIG. 3).

Bader fails to teach the step of monitoring the status of the primary network path. However, Bass discloses: "The remote test and control system of the invention provides remote testing and switching capability for a data communications network having primary and backup facilities through a network controller," (lines 30-33 of column 3).

One of ordinary skill in the art at the time of the applicant's invention would have clearly recognized that it is quite advantageous for the network controller in Bader to periodically test a condition of the backup network paths. "A network controller located at a central location which contains standard test equipment for generating and analyzing the test signals that are applied to the network for troubleshooting as well as generating and transmitting to the individual network remote data terminal stations command signals for effectuating switching changes threat to reconfigure the network by switching between primary and backup facilities and also establish various test modes," (lines 33-42 of column 2). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have the network controller periodically test a condition of the backup network paths in the system as taught by Bader.

q.        Claims 35 and 40 rejected under 35 U.S.C. 103(a) as being unpatentable over Bader in view of Bass as applied to claims 33 and 38 respectively above.

Bader teaches at least some of the network devices comprise universal relays, (lines 32-44 of column 7).

r.        Claims 36 and 41 rejected under 35 U.S.C. 103(a) as being unpatentable

over Bader in view of Bass as applied to claims 33 and 38 respectively above.

Bader teaches at least some of the network devices comprise a process

controller, (lines 21-26 of column 5).

s.        Claims 37 and 42-43 rejected under 35 U.S.C. 103(a) as being

unpatentable over Bader in view of Bass, as applied to claims 33 and 38 respectively

above, in view of Law.

Bader fails to teach the primary network paths and primary backup network paths

comprising a plurality of network bridges.  However, Law discloses: "The primary

interconnect 18 is a Cisco Catalyst Model No. 5002 100BaseT Ethernet switch and the

secondary interconnect 20 is a Cisco Model No. 7206 10BaseT Ethernet switch," (lines

63-66 of column 3).

One of ordinary skill in the art at the time of the applicant's invention would have

clearly recognized that it is quite advantageous for the primary network paths and

primary backup network paths to comprise a plurality of network bridges. "Two or more

switches can be connected together to increase the total number of ports available for

connecting NAS's together," (lines 19-22 of column 4 in Law).  It is for this reason that

one of ordinary skill in the art at the time of the applicant's invention would have been

motivated to comprise the primary network paths and primary backup network paths of

a plurality of network bridges in the system as taught by Bader.

## Response to Arguments

7.      Applicant's arguments filed 09 November 2004 have been fully considered but

they are not persuasive.

8.      Applicant's arguments for *all* claims discussed on pages 13-24 in Amendment

dated 09 November 2004 pertain to point (A) below.

9.      (A) Applicant argues that Bader does not teach: "each predetermined primary

backup network path is blocked by the network controller when a corresponding primary

network path is active" and "when a primary network path between a network device

and the primary network controller fails, the primary network controller blocks the failed

primary network path and switches to one of the predetermined primary backup network

paths."

10.     As to point (A), the examiner respectfully disagrees.  Bader discloses: "Upon a

failure along the primary communications path (block 22), the network control

hardware/software typically will attempt to reactivate the primary communications path

one or more times (not shown in FIG. 3). If these reactivation attempts are

unsuccessful, the network control hardware/software then may activate the secondary

network communications path (block 24)," (lines 50-57 of column 7).  The fact that the

secondary network communications path is *activated* indicates that it was previously

inactive (i.e. blocked).  This aspect is also shown in Fig. 3.  Bader adds: "As will be

recognized by those of skill in the art, such a reassignment may be implemented in any

number of ways, including setting the "cost" associated with the secondary

communications path to a level lower than the cost associated with the primary network

communications path or by removing the primary network communications path as an option in the database of available paths," (line 65 of column 7 through line 5 of column 8). Removing the primary network communications path as an option in the database of available paths is a way of blocking the failed primary path. Both citations and Fig. 3 wholly disclose blocking the failed primary network path and switching to a secondary network path.

### *Conclusion*

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Meucci at (571) 272-3892. The examiner can normally be reached on Monday-Friday from 10:00 AM to 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Harvey, can be reached at (571) 272-3896. The fax phone number for this Group is (703) 872-9306.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [michael.meucci@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).